

AMENDMENT UNDER 37 C.F.R. § 1.111

U.S. Appln. No. 09/864,082

Attorney Docket Q64550

IN THE CLAIMS:

1. (canceled).
2. (currently amended) A multilayer recording medium [according to claim 1,] further comprising:
a rewritable multilayer recording medium in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, wherein a dummy signal is recorded on said one recording layer prior to recording of the data signal on said another recording layer
wherein a frequency f of said dummy signal satisfies;
$$f \geq v \times n / (2 \times NA \times d)$$

where,
d (mm): interval between said one recording layer and said another recording layer
NA: numerical aperture of an objective lens for converging said light beam
n: refractive index of a medium between said one recording layer and said another recording layer
v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.
3. (canceled).
4. (original) A multilayer recording medium according to claim 2, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a transmittance after a predetermined data signal is recorded to said one recording layer.

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5. (canceled).

6. (currently amended): ~~An apparatus according to claim 5,~~ A recording apparatus of a rewritable multilayer recording medium in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, comprising:

a recording unit for recording a dummy signal on said one recording layer prior to recording of the data signal on said another recording layer;

wherein said recording unit includes a dummy-signal generating unit for generating said dummy signal and a frequency f of said dummy signal satisfies;

$$f \geq v \times n / (2 \times NA \times d)$$

where,

d (mm): interval between said one recording layer and said another recording layer

NA : numerical aperture of an objective lens for converging said light beam

n : refractive index of a medium between said one recording layer and said another recording layer

v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.

7. (canceled).

8. (original) An apparatus according to claim 6, wherein said dummy signal has a pulse train such that a transmittance of said one recording layer after said dummy signal is recorded is approximately identical to a transmittance after a predetermined data signal is recorded to said one recording layer.

9. (currently amended): ~~An apparatus according to claim 5,~~ A recording apparatus of a rewritable multilayer recording medium in which a light beam is transmitted through one

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recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, comprising:

a recording unit for recording a dummy signal on said one recording layer prior to recording of the data signal on said another recording layer;

wherein said light beam has an elliptic beam spot whose major axis is located in a direction that is approximately perpendicular to tracks on said multilayer recording medium and said beam spot is located over a plurality of tracks of said multilayer recording medium.

10. (canceled).

11. (canceled).

12. (currently amended): A recording method of a rewritable multilayer recording medium according to claim 11, in which a light beam is transmitted through one recording layer and at the same time said light beam is irradiated to another recording layer, thereby recording a data signal, comprising:

a first initializing step of initializing said another recording layer based on a first initializing condition; and

a second initializing step of initializing said one recording layer based on a second initializing condition different from said first initializing condition,

wherein:

~~said second initializing condition is determined so that a transmittance of the recording layer after execution of said second initializing step is approximately equal to a transmittance of the recording layer after a predetermined data signal is recorded on said one recording layer;~~

~~a dummy signal is recorded on said one recording layer; and~~

a frequency f of said dummy signal satisfies

$$f \geq v \times n / (2 \times NA \times d)$$

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where,

d (mm): interval between said one recording layer and said another recording layer

NA: numerical aperture of an objective lens for converging said light beam

n: refractive index of a medium between said one recording layer and said another recording layer

v (mm/sec): line velocity of said multilayer recording medium when recording said dummy signal.